

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA

VNUS MEDICAL TECHNOLOGIES, INC.

No. C-05-2972 MMC

Plaintiff

v.

**AMENDED ORDER CONSTRUING  
CLAIMS**

DIOMED HOLDINGS, INC., et al.,

Defendant

The Order Construing Claims, filed November 20, 2006, is hereby AMENDED to correct a typographical error, specifically, to replace the phrase “a tubular, flexible, surgical instrument, including, but limited to, a sheath,” as found on page 2 and on page 3, with the phrase “a tubular, flexible, surgical instrument, including, but not limited to, a sheath”:

Before the Court is the parties’ dispute regarding the proper construction of ten terms in four patents, specifically, U.S. Patent 6,638,273 (“273 Patent”), U.S. Patent 6,258,084 (“084 Patent”), U.S. Patent 6,752,803 (“803 Patent”), and U.S. Patent 6,769,433 (“433 Patent”).<sup>1</sup> Plaintiff Vnus Medical Technologies (“Vnus”), defendants Diomed Holdings, Inc., Diomed, Inc. (collectively, “Diomed”), defendant AngioDynamics, Inc. (“AngioDynamics”), and defendant Vascular Solutions, Inc. (“VSI”) have submitted

<sup>1</sup>The claims in which each of the ten disputed terms are found are set forth in Exhibit B to the Amended Patent Local Rule 4-3(b) Chart, filed October 23, 2006.

1 briefs and evidence in support of their respective positions on the disputed terms. The  
 2 matter came on regularly for hearing on October 30, 2006. Matthew B. Lehr and Suong T.  
 3 Nguyen of Davis, Polk & Wardwell appeared on behalf of Vnus. Howard A. Slavitt of  
 4 Coblenz, Patch, Duffy & Bass, LLP, and Michael A. Alpert and Michael N. Rader of Wolf,  
 5 Greenberg & Sacks, P.C., appeared on behalf of Diomed. William H. Bright, Jr., and Mark  
 6 D. Giarratana of McCarter & English, LLP, appeared on behalf of AngioDynamics. J.  
 7 Thomas Vitt of Dorsey & Whitney, LLP, appeared on behalf of VSI.

8 Having considered the papers submitted and the arguments of counsel, the Court  
 9 rules as follows.<sup>2</sup>

10 **1. A Catheter Having A Working End (Claim 1, '803 Patent; Claim 1, '433 Patent)**

11 Vnus argues "catheter," as found in the term "a catheter having a working end"  
 12 should be construed as "a tubular, flexible, surgical instrument that is inserted into a cavity  
 13 of the body, including, but not limited to, a sheath," and argues "working end," as found in  
 14 the subject term, should be construed as "direction toward the treatment site in the patient  
 15 (contrast with connecting end)." Defendants argue "a catheter having a working end"  
 16 should be construed as "a hollow, tubular instrument pre-assembled with electrodes  
 17 capable of applying energy at the end of the instrument proximate the treatment site."<sup>3</sup>

18 The Court, for the reasons stated by Vnus, finds "a catheter having a working end" is  
 19 properly construed as "a tubular, flexible, surgical instrument, including, but not limited to, a  
 20 sheath, having an end directed toward the treatment site in the patient."<sup>4</sup>

21 //

---

22  
 23 <sup>2</sup>Where the Court has adopted a party's proposed construction as to a term, the  
 24 adopted construction is set forth below without further discussion. Where the Court has  
 adopted one party's construction, but with some modification, an explanation is provided.

25 <sup>3</sup>The parties' respective constructions as set forth herein are taken from the  
 26 Amended Patent Local Rule 4-3(b) Chart, filed October 23, 2006. Any brackets contained  
 in such constructions as set forth herein are in the original.

27 <sup>4</sup>The Court has not adopted the additional language proposed by Vnus, specifically,  
 28 "that is inserted into a cavity of the body"; such language is a proposed construction of "into  
 the hollow anatomical structure," which is not one of the ten disputed terms before the  
 Court.

**2. A Catheter Having A Working End With An Energy Application Device At The Working End (Claims 1 and 18, '084 Patent)**

Vnus argues “catheter” and “having a working end,” as found in the term “a catheter having a working end with an energy application device at the working end,” should be construed as set forth above with respect to the first disputed term, and additionally argues the phrase “energy application device,” as set forth in the subject term, should be construed as “a device for delivering energy, such energy includes, but is not limited to, RF energy, microwaves, ultrasound, direct current, circulating heated fluid, radiant light and lasers.” Defendants argue “a catheter having a working end” should be construed as “a hollow, tubular instrument pre-assembled with electrodes capable of applying energy at the end of the instrument proximate the treatment site.”

The Court, for the reasons stated by Vnus, finds “a catheter having a working end with an energy application device at the working end” is properly construed as “a tubular, flexible, surgical instrument, including, but not limited to, a sheath, having an end directed toward the treatment site in the patient, with a device at that end for delivering energy, such energy including, but not limited to, RF energy, microwaves, ultrasound, direct current, circulating heated fluid, radiant light, laser, and thermal energy.”<sup>5</sup>

**3. Effectively Occlude (Claim 1, '803 Patent)**

Vnus argues “effectively occlude” should be construed as “significantly reduce the flow of blood through the treated hollow anatomical structure, including, but not limited to, full-lumen closure.” Defendants argue “effectively occlude” should be construed as “to shrink the inner diameter of the [hollow structure/vein] to be no smaller than the electrode device, thus reducing but not eliminating the flow of fluid (e.g., blood) through the lumen after the electrode device is removed. The [hollow structure/vein] must maintain this smaller but non-zero diameter with a reduced but continued fluid flow for a lasting (i.e. non-

---

<sup>5</sup>For the reasons stated above with respect to the first disputed term, the Court has not adopted Vnus’ proposed additional language, specifically, “that is inserted into a cavity of the body.” The Court has added “thermal energy” to Vnus’ proposed construction. See ‘084 Patent, col. 7, ll. 58-59.

temporary) period.”

The Court, for the reasons stated by Vnus, finds “effectively occlude” is properly construed as “significantly reduce the flow of blood through the treated hollow anatomical structure, including, but not limited to, full-lumen closure.”

**4. Durably Assumes A Smaller Size (Claim 1, ‘084 Patent)/Durably Assumes A Reduced Size (Claim 1, ‘803 Patent)**

Vnus argues the term “durably assumes a smaller size”/“durably assumes a reduced size” should be construed as “assumption and retention of compressed diameter after treatment smaller than pre-treatment.” Defendants argue the term “durably assumes a smaller size”/“durably assumes a reduced size” should be construed as “the [hollow structure/vein] must maintain this smaller but non-zero diameter with a reduced but continued fluid flow for a lasting (i.e. non-temporary) period. The [hollow structure/vein] must maintain this smaller but non-zero diameter with a reduced but continued fluid flow for a lasting (i.e. non-temporary) period.”

The Court, for the reasons stated by Vnus, finds “durably assumes a smaller size”/“durably assumes a reduced size” is properly construed as “assumes and retains a compressed diameter after treatment smaller than pre-treatment.”

**5. Durably Assume A Diameter At Least As Small As The Reduced Diameter Achieved In The Step Of Pre-shaping” (Claim 1, ‘433 Patent)**

Vnus argues “durably assume a diameter at least as small as the reduced diameter achieved in the step of pre-shaping” should be construed in the same manner as “durably assumes a smaller size”/“durably assumes a reduced size,” specifically, “assumption and retention of compressed diameter after treatment smaller than pre-treatment.” Defendants argue “durably assume a diameter at least as small as the reduced diameter achieved in the step of pre-shaping” should be construed in the same manner as “durably assumes a smaller size”/“durably assumes a reduced size,” specifically, “the [hollow structure/vein] must maintain this smaller but non-zero diameter with a reduced but continued fluid flow for a lasting (i.e. non-temporary) period. The [hollow structure/vein] must maintain this smaller

1 but non-zero diameter with a reduced but continued fluid flow for a lasting (i.e. non-  
2 temporary) period.”

3 The Court, for the reasons stated by Vnus, finds “durably assume a diameter at least  
4 as small as the reduced diameter achieved in the step of pre-shaping” is properly construed  
5 as “assumes and retains a compressed diameter after treatment smaller than pre-  
6 treatment.”

#### 7 **6. Remain At the Specific Size (Claim 1, ‘273 Patent)**

8 Vnus argues “remain at the specific size” should be construed in the same manner  
9 as “durably assumes a smaller size”/“durably assumes a reduced size” and “durably  
10 assume a diameter at least as small as the reduced diameter achieved in the step of pre-  
11 shaping,” specifically, “assumption and retention of compressed diameter after treatment  
12 smaller than pre-treatment.” Defendants argue “remain at the specific size” should be  
13 construed as “until the hollow anatomical structure will maintain the predetermined smaller  
14 but non-zero diameter, accommodating ordinary levels of fluid (e.g., blood) flow for a lasting  
15 (i.e., non-temporary) period without external compression.”

16 The Court, for the reasons stated by defendants, finds “remain at the specific size” is  
17 properly construed as “maintain the predetermined smaller but non-zero diameter for a  
18 lasting (i.e., non-temporary) period without external compression.”<sup>6</sup>

#### 19 **7. Positioning . . . At A Treatment Site (Claim 1, ‘803 Patent; Claim 1, ‘273 Patent)**

20 Vnus argues the term “positioning . . . at a treatment site” does not require  
21 construction. Defendants argue “positioning . . . at a treatment site” should be construed  
22 as “deliberately placing the working end of the catheter in physical contact with the site on  
23 the inner wall of the hollow anatomical structure that is to receive energy from the electrode

24 //

---

26 <sup>6</sup>The Court has not adopted defendants’ proposed additional language, specifically,  
27 the phrases “accommodating ordinary levels of fluid (e.g., blood) flow” and “until the hollow  
28 anatomical structure will.” Defendants have failed to show the patent requires  
accommodation of “ordinary” flow, and the claim already includes the phrase “such that the  
hollow structure will.” See ‘273 Patent, col. 19, line 18.

1 device.”<sup>7</sup>

2 The Court, for the reasons stated by Vnus, finds “positioning . . . at a treatment site”  
3 does not require construction.

#### 4 **8. Pre-shaping (Claim 1, ‘433 Patent)**

5 Vnus argues the term “pre-shaping” does not require construction. Defendants  
6 argue “pre-shaping” should be construed as “applying compression external to the body to  
7 shape the vein such that the inner wall of the vein collapses into contact with the electrode  
8 device.”

9 The Court finds “pre-shaping” is properly construed as “applying compression  
10 external to the vein to shape.”<sup>8</sup>

#### 11 **9. Applying Energy To (Claim 1, ‘803 Patent; Claims 1 and 18, ‘084 Patent)/Applying** 12 **Energy . . . To (Claim 1, ‘433 Patent)**

13 Vnus argues the term “applying energy to”/“applying energy . . . to” does not require  
14 construction. Defendants argue “applying energy to”/“applying energy . . . to” should be  
15 construed as “applying energy directly to the inner wall of the [hollow anatomical structure/  
16 vein] through physical contact between the electrode device and the inner wall of the  
17 [hollow anatomical structure/vein] and maintaining the electrode device in physical contact  
18 with the inner wall.”

19 The Court, for the reasons stated by Vnus, finds “applying energy to”/“applying  
20 energy . . . to” does not require construction.

---

21  
22 <sup>7</sup>Diomed has taken no position with respect to the construction of disputed terms 7  
23 through 10. Accordingly, the reference to “defendants,” for purposes of disputed terms 7  
through 10, is a reference to AngioDynamics and VSI only.

24 <sup>8</sup>The Court has not adopted defendants’ proposed construction that the compression  
25 must be external to the “body”; although the specification states that a tourniquet “can be  
26 used” to “externally compress” the vein, see, e.g., ‘433 Patent, col. 4, ll. 18-25, the  
27 specification does not include language limiting the patent to only that manner of external  
28 compression. Additionally, the Court has not included in its construction the phrase “the  
vein such that the inner wall of the vein,” because such language is already included in  
Claim 1. See id., col. 19, ll. 20-21. Finally, the Court has not included in its construction  
defendants’ proposed additional phrase “collapses into contact with the electrode device”;  
such language is a proposed construction of “is brought toward the working end of the  
catheter,” which is not one of the ten disputed terms before the Court.


1 **10. Moving . . . Along (Claims 20 and 21, '084 Patent; Claim 2, '803 Patent; Claim 1,**  
2 **'433 Patent)**

3 Vnus argues the term "moving . . . along" does not require construction. Defendants  
4 argue "moving . . . along" should be construed as "moving the electrode catheter along the  
5 inner wall of the vein while maintaining physical contact between the electrode and the  
6 inner wall of the vein while the electrode applies energy to the vein."

7 The Court, for the reasons stated by Vnus, finds "moving . . . along" does not require  
8 construction.

9 **IT IS SO ORDERED.**

10  
11 Dated: November 22, 2006

  
MAKINE M. CHESNEY  
United States District Judge